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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
09/385,102	08/27/1999	TOSHIHIRO SHIMA	04783/008001	8708		
22511	7590 10/17/2003		EXAM	EXAMINER		
ROSENTHAL & OSHA L.L.P.			PARK, C	PARK, CHAN S		
SUITE 2800	NEY AVENUE		ART UNIT	PAPER NUMBER		
HOUSTON,	ΓX 77010		2622	10		
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Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Application Application										
Examiner CHAN S PARK - The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Exercision of time may be available under the provisions of 37 CPR 1.15(lg), In no event, however, may a reply be timely tilled. If the period for reply is pecified above, the maximum statistical profess of all copies and the statistical profess of the correspondence address. If the period for reply is pecified above, the maximum statistical profess of all copies and will expire and will expire and will be statistically profess. If the period for reply is pecified above, the maximum statistical profess of all pecified and will be statistically profess of all pecified and the communication. Exercision is the communication. If the period for reply is pecified above, the maximum statistical profess of all pecified and the communication is think good and will be addressed to the communication. Any reply received by the Official the share here making caste of this communication, even if timely filled, may reduce any summer patient term eligination is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1.24 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 5) Claim(s) are subject to restriction and/or election requirement. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) the proposed drawing correction filled on is: all paptoved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The proposed drawing correction filled on is: all paptoved by the			Application	No.	Applicant(s)					
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A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filled - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filled - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filled - If No period for reply is available under the provisions of 37 CFR 1.136(a). - If NO period for reply is available under the maximum statutory provised will apply and vell expire SIX (b) MONTH'S from the mailling date of this communication. - If NO period for reply is appelled above, the maximum statutory provided will apply and vell expire SIX (b) MONTH'S from the mailling date of this communication. - If NO period for reply is appelled above, the maximum statutory provided will apply and vell expire SIX (b) MONTH'S from the mailling date of this communication. - Any province-worked by the official set than three months after the mailing date of this communication, even if limely filed, may reduce any - Any reply received by the difficial set than three months after the mailing date of this communication, even if limely filed, may reduce any - Any reply received by the difficial set than three months and the communication. - Any reply received by the difficial of the communication of the communication, even if limely filed, may reduce any - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed on 10/3/99. - Any reply received by the filed by the filed on		The MAN INC DATE of this areas	t4!							
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DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/385102, filed on 27 August, 1999.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 1. Claims 3 and 13 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant regards as his invention. Evidence that claims 3 and 13 fail to correspond in scope with that which applicants regards as the invention can be found in Paper No. 1 filed on August 27, 1999. In that paper, applicant has stated "... if it (received data monitor) determines that the amount of packet data stored in the network memory is large (over a specific value)... the priority alteration unit sets the priority of the language task higher than the priority of the communication task," and this statement indicates that the invention is different from what is defined in the claim(s) because it states "... in said first memory (network memory) is below a specific value".
- Claims 4 and 14 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant regards as his invention. Evidence that

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claims 4 and 14 fail to correspond in scope with that which applicants regards as the invention can be found in Paper No. 1 filed on August 27, 1999. In that paper, applicant has stated "...if it (received data monitor) determines that the amount of packet data stored in the network memory is small (below a specific value)... the priority alteration unit sets the priority of the communication task higher than the priority of the language task," and this statement indicates that the invention is different from what is defined in the claim(s) because it states "... in said first memory (network memory) is over a specific value".

3. Claims 6, 7, 16, 17, 22, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The wording "specific value" describing the condition of "second memory" is unclear as to its meaning, and is not defined in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa U.S. Patent No. 6,029,238 in view of Mishima et al. U.S. Patent No. 6,449,056.

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4. With respect to claim 1, the Furukawa reference discloses a printer controller (printer PT1 in fig.3) comprising:

Communication control means (communication controller 41 in conjunction with file memory 47) for receiving data from host computers (host computer WS in fig. 1) and extracting print job data on the basis of the received data (col. 6, lines 1-5);

Language control means (main controller 41 in conjunction with file memory 47) for generating image data on the basis of said print job data (col. 6, lines 9-15); and Print control means for controlling a print engine (print process controller 45).

Although the Furukawa reference does not explicitly disclose the data being a self-address packet data, in a network environment, it is inherent that each print data sent by the host computer has an address of the printer for the proper transmission of the print data. It is also well known in the art at the time the invention was made to extract the only the print job part of the packet data for the further image processing by the printer. Also refer to col. 6, lines 33-34.

The Furukawa reference does not disclose an execution means for exclusively executing either of three said control means according to priorities assigned to each of these means nor alteration means for altering, on the basis of specific events, the relative priority sequence based on the priority between said communication control means and said language control means.

On the other hand, the Mishima et al. reference discloses a digital copier connected to a host computer over network for receiving print data (fig. 25). According to the reference, it teaches the method of sending information on the availability of

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memory space in the digital copier. When the memory of the digital copier gets full, it stops the transmission of next print data from the host computer. Meanwhile, the digital copier informs the host computer when the copier memory will be available for next print data to be received and starts emptying the memory space by printing out the print data (fig. 28 – fig. 31), which clearly discloses the method of altering the communication control means and the image generating control means.

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the print controller of Furukawa with the Mishima et al. method of freeing the memory by printing out printing data while stopping the transmission of next print data from the host computer.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

5. With respect to claim 2, the Furukawa reference discloses a first memory (file memory 47) for storing the packet data received by said communication control means (col. 6, lines 2-3). The reference also discloses the method of self-checking the capability of printing performance (col. 12, lines 1-5).

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The reference, however, does not disclose first monitoring means for generating said specific events on the basis of the amount of packet data stored in said first memory.

The Mishima et al. reference discloses memory capacity monitoring means for generating said specific events (full-memory state) on the basis of the amount of data stored in said memory (col. 17, lines 30-33).

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Furukawa first memory and the Mishima et al. method of monitoring the capacity of memory to generate specific events.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

6. With respect to claims 3, 4, and 21 as noted above in claim 1, the Furukawa reference discloses the language control means and communication control means but it does not disclose the alteration means for raising the priority between two control means on the basis of the amount of data stored in said first memory.

On the other hand, the Mishima et al. reference discloses a digital copier connected to a host computer over network for receiving print data (fig. 25). According to the reference, it teaches the method of sending information on the availability of memory space in the digital copier. When the memory of the digital copier gets full, it

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stops the transmission of next print data from the host computer. Meanwhile, the digital copier informs the host computer when the copier memory will be available for next print data to be received and starts emptying the memory space by printing out the print data (fig. 28 – fig. 31), which clearly discloses the method of altering the communication control means and the image generating control means. For example, when monitoring means indicates the memory full state, the transmission of print data from the host computer to the printer/copier stops and frees the memory by running the image generating means first. When the memory has a space to receive more data, the communication control means takes more data and stores it in the memory to be further processed by language control means.

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Furukawa first memory and the Mishima et al. method of monitoring the capacity of memory to raise the priority between two control means on the basis of said specific events.

The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

Note that the office has interpreted the claim 3 "...said first memory is <u>below</u> a specific value" as "...said first memory is <u>over</u> a specific value."

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Note that the office has interpreted the claim 4 "...said first memory is <u>over</u> a specific value" as "...said first memory is <u>below</u> a specific value."

Note that the office has interpreted the claim 21 "...said first memory is <u>over</u> a specific value" as "...said first memory is <u>below</u> a specific value."

- With respect to claim 5, the combination of the Furukawa reference and the
 Mishima et al. reference discloses a printer controller having all the limitations of claim
- 1. However, it does not explicitly disclose the controller having a second memory for storing the print job data extracted by said communication control means and second monitoring means for monitoring the available memory capacity.

As noted above in arguments for claim 2, the Mitshima et al. reference discloses the method of monitory the memory capacity.

Although Furukawa does not explicitly disclose the second memory for storing extracted print job data from the packet data, it is well known in the art at the time the invention was made to have a memory device for print job data. It is very well known that when data is transfer from one task to the next task, it must be stored in a memory device like RAM first.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the second memory and the Mishima et al. method of monitoring the capacity of memory to generate specific events.

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The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

8. With respect to claims 6, 7, and 22, arguments analogous to those presented for claims 3, 4, and 21, are applicable.

Note that the office has interpreted the claim 6 "...said second memory is <u>below</u> a specific value" as "...said second memory has <u>much free space</u>."

Note that the office has interpreted the claim 7 "...said second memory is <u>over</u> a specific value" as "...said second memory has <u>little free space</u>."

Note that the office has interpreted the claim 22 "...said second memory is <u>below</u> a specific value" as "...said second memory has <u>much free space</u>."

- 9. With respect to claim 8, arguments analogous to those presented for claim 1, are applicable.
- 10. With respect to claim 9, all the limitations of claim 9 are noted in arguments for claims 1 and 8 except a program product in which is recorded a program to be executed by the processor of a printer.

The Mishima et al. reference further discloses a processor of a printer to execute a program for controlling the different modules (col. 9, lines 8-10 & col. 9, lines 27-35).

11. With respect to claim 10, the Furukawa reference discloses a printer (PT1) comprising:

A controller (main controller 41);

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A print engine for printing on a print recording medium (col. 6, lines 14-16);

A communication interface (network interface 52) connected to a network such that communication with host computers is possible (col. 6, lines 33-34);

With respect to remaining elements of the claim, arguments analogous to those presented for claim 1, are applicable.

12. With respect to claims 11 and 18, as noted above in claim 1, the combination of the Furukawa reference and the Mishima et al. reference discloses all the limitations of the claim except alteration means for altering, on the basis of specific events, the relative time proportions or the relative time ratio between the execution time in which said execution means is to execute said communication control means and the execution time in which said execution means is to execute said language control means.

The Mishima et al. reference, however, further discloses the method of notifying the user how much time it will take for the memory to free its memory space for next print data (fig. 29 – fig. 31).

Furukawa and Mishima et al. are analogous art because they are from the same field of endeavor that is the network printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the print controller of Furukawa with the Mishima et al. method of updating the current memory capacity and the time it takes for the memory to free its space for the print data.

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The suggestion/motivation for doing so would have been to prevent the possible loss of print data by overflowing the memory. Thus, the combination method would have allowed users to form image more efficiently.

- 13. With respect to claim 12, arguments analogous to those presented for claim 2, are applicable.
- 14. With respect to claims 13, 14, and 23, arguments analogous to those presented for claims 3, 4, and 21 are applicable.
- 15. With respect to claim 15, arguments analogous to those presented for claim 5, are applicable.
- 16. With respect to claims 16, 17 and 24, arguments analogous to those presented for claims 6, 7, and 22 are applicable.
- 17. With respect to claim 19, arguments analogous to those presented for claims 1 and 18, are applicable.
- 18. With respect to claim 20, arguments analogous to those presented for claims 10 and 18, are applicable.

Conclusion

- 19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- U.S. Patent 5,812,283 to Tachibana et al. discloses a method for recognizing the capacity of memory and releasing a data in the memory to a recording medium to free up the space for the next data to be stored.

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U.S. Patent 6,570,666 to Sotokawa discloses a method of instructing the host computer to stop transmitting print data when the printer memory is full.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Csp

October 6, 2003

TECHNOLOGY CENTER